

Technical Report 390

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AN EXPLORATORY INVESTIGATION OF THE SKILL QUALIFICATION TESTING SYSTEM

Veronica F. Nieva, David Myers, and Albert S. Glickman
Advanced Research Resources Organization

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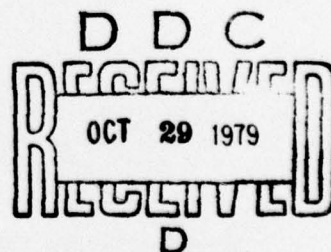


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AN EXPLORATORY INVESTIGATION OF THE SKILL QUALIFICATION TESTING SYSTEM

BRIEF

Requirement:

To explore initial reactions to the Skill Qualification Test (SQT) and its components, and to learn how well the SQT system operates in the field.

Procedure:

In December 1977, semi-structured interviews were conducted with 52 enlisted men at Fort Polk, Louisiana. The interviews were designed to provide information on user reaction to the various components of the Skill Qualification Test (SQT) system: the Soldier's Manual, the SQT notice and the test itself. They were also designed to uncover information about the way in which the SQT system was operating and SQT-related activities on post.

Findings:

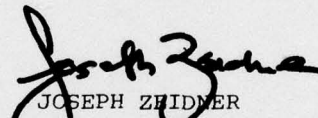
Results of the interviews indicated that instructors used the Soldier's Manual most, while the enlisted personnel used the Manuals primarily for reference. Those soldiers who realized the function of the SQT Notice found it useful. Reaction to the SQT was generally favorable, although test-related problems were identified. More soldiers who had formal training for the SQT reported passing the test than soldiers who had prepared for the test on their own.

Utilization of Findings:

Specific long-range and short-range suggestions address perceived problem areas. Training managers will be particularly interested in the report.

FOREWORD

Improvement in the efficiency and economy of enlisted training, evaluation, and utilization essential to maintaining maximum combat readiness of the Army is a major concern of the Training Technical Area of the Army Research Institute for the Behavioral and Social Sciences (ARI). Present Army policy emphasizes performance-based training and testing; ARI research has made possible the development, validation, and application of performance-based, criterion-referenced Skill Qualification Tests (SQTs) as well as self-contained procedures by which Army Test Development Agencies can construct and validate the SQTs. This report explores on a small scale the way the SQT system was operating in December 1977, as well as user reactions to four SQTs in an operational setting. Research was accomplished under Army Project 2Q762722A764, and is directly responsive to the requirements of the Individual Training and Evaluation (ITE) of the Army Training Support Center, Fort Eustis, Virginia. The work was done by personnel of ARI and the Advanced Research Resources Organization under Contract DAHC19-77-C-0032.


JOSEPH ZIDNER
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AN EXPLORATORY INVESTIGATION OF THE SKILL QUALIFICATION TESTING SYSTEM

INTRODUCTION

The Skill Qualification Test (SQT) is a new and still evolving Army system. It is a performance-oriented test, derived from critical tasks delineated in the Soldier's Manual. It is also a criterion-referenced test with pre-determined absolute standards interpretable in their own right without reference to the performance of other test-takers. As such, it represents a significant departure from the norm-referenced method previously employed for MOS testing.

Record testing for the SQT began in April 1977. This study, conducted in December 1977, represents an exploration of initial reactions in the field of various components of the SQT system: the Soldier's Manuals, SQT Notices and the test itself. It was also intended to uncover information about the way in which the system was operating and the SQT-related activities undertaken on post.

Information on user reaction and actual system operation is important for the effective functioning and utilization of the SQT system. In particular, this type of information should be useful for those concerned with test construction and administration and for Army personnel involved in training. This survey can serve as a prototype for a feedback system to furnish data as needed on various SQT-related matters. The specific findings presented here, however, are based on an extremely small sample that can in no way be construed as representative of the Army population. They should be regarded as tentative leads for further investigation, rather than definitive conclusions.

SAMPLE

Semi-structured interviews (Appendix A) were conducted with 52 enlisted men at Fort Polk, Louisiana, in December 1977. The interviews were conducted by three ARRO staff members, and took approximately one-half hour each. The interviews were developed collaboratively by ARRO personnel and the ARI project monitor.

Negotiations for site participation were conducted by ARI, with prior SQT experience on post as the major criterion. Respondents were selected by post authorities across 4 MOS (Military Occupational Specialty) and across skill levels 1, 2 and 3. The MOS breakdown is presented in Table I.

Table I

Sample broken down by MOS

<u>MOS</u>	<u>Total</u>
Military Police (95B)	15
Infantryman (11B)	13
Heavy Weapon Infantryman (11C)	17
Chaparral Crewman (16P)	<u>7</u>
Total	52

METHOD

The interviews were content-analyzed according to three major areas: the Soldier's Manual, the SQT Notice and the Skills Qualification Test. Within each area, specific topics (e.g., feedback of results, training for the SQT) are dealt with. The responses on each topic area were examined for possible effects of demographic variables (i.e., race, rank, education, and MOS). The discussion of results refers to these variables when some indication of effect was found in the data. A crude frequency count of responses to each topic was conducted, in order to give rough indication of weightings for results and conclusions. A few quotes are included to provide a sense of the interviews' flavor. It should be noted here that not all soldiers interviewed responded to each issue.

RESULTS

I. Soldiers Manual

A. Evaluation of the Manual

Almost all the soldiers interviewed had their own Manuals. In general the reaction to the Manual was positive--the soldiers appreciated having such a reference available to remind them of their job duties, particularly those not in immediate use. For the most part, they felt that the job descriptions contained in the Manual were adequate and helpful. Readability was not as large a problem as anticipated, judging from the soldiers' own reports. With very few exceptions most said the Manual was understandable, its language not too complicated. There was expressed desire, however, for improving the illustrations and for including more narrative in the Manual.

There were high levels of satisfaction with the 11B and 11C Manuals, but there were many complaints about the 16P Manual and a few about the 95B Manual. People thought that differences could be accounted for by a number of things, e.g., the degree of procedure standardization across posts, the logic being the MOS classification itself and the adequacy of job coverage in the Manual. Illustrations of these complaints were provided by the interviews. For the MPs, the major problem was the lack of congruence between local regulations and procedures, and standard operations described in the Manual. Conformity with Manual contents was perceived as counterproductive to sound functioning at the local level. In the 16Ps, the problem lay in the way the MOS was split into two types of weapon systems--the Chaparral and Redeye. Whereas the Manual was focused heavily on Chaparral concerns, most of the 16Ps on post were Redeyes. It also appeared that much of the relevant Redeye information was not readily available on post. In contrast to the 11B and 11C Manuals the 16P Manual was seen as merely suggesting sources of information, rather than telling soldiers how to perform on their jobs.

One major dilemma inherent in the construction of the Soldier's Manual concerns the appropriate level of detail or completeness of the manual. While certain areas were seen as over-explained, other areas appeared to be

neglected. Some soldiers said:

"It's helpful in telling you where to go for what you need, just like a small outline. It should be all there instead of having to look up all the references elsewhere."

"In some parts it's complete and self-explanatory. In other areas it refers you to too many training manuals and field manuals. Cross referencing can get you confused - two different references can be contradictory."

The 16Ps and MPs particularly, felt the need to go to other sources or references cited in the Soldier's Manual (e.g., Field Manual, Army Regulations) to obtain adequate description of their tasks.

Although the citations were useful, in some cases, the references were not readily available on post. While practical size considerations probably would make it impossible for the Manual to contain all relevant information for all tasks, having references readily available to interested soldiers would seem like a reasonable goal.

B. Use of the Manual

For the most part, the Manual was seen as a reference tool, to be referred to as need arose. Actual reading of the Manual varied widely among soldiers. Almost all soldiers had skimmed through the whole Manual and had read relevant parts of it, and most had read considerable sections in preparing for the SQT. Greatest use was reported by soldiers whose units had held training classes based on the Manual (i.e., 11B and 11C). For the soldiers without this type of unit training, there was no official time set for the Manual--they were expected to study the Manual on their own time.

Given the bulk of the Manual and its style of presentation, its primary use as an information resource seems reasonable. If it is felt to be important that soldiers thoroughly read the Manual, instead of merely referring to it, substantial changes in its style and format would be required. As a soldier said:

"The pages get all wet and filthy. It's cumbersome, can really only be used in the classroom. I want an all-weather book."

It may be feasible to provide each soldier with a Job Book, a pocket-sized listing of MOS duties. At present, the Job Book is only accessible to NCOs.

At Fort Polk almost all of the MPs (95Bs) received the Notice, with a slight majority reporting use in preparing for the test. All of the Chaparral crewmen (16Ps) received and used the Notice to prepare for the SQT. In contrast, only three quarters of the 11Bs and 11Cs reported receiving the Notice and about half of them used it to prepare for the test. The enlisted personnel reported receipt of the Notice an average of three months prior to testing time.

Many of those who did not use the Notice had no appreciation of its significance and possible utility. The SQT Notice seemed to be buried among the various notices the soldiers received, so much so that many could not recall what the SQT Notice was until they were shown a copy.

For those who used the Notice, it served a number of functions. It alerted the soldiers and their supervisors as to when the SQT would be given. It allowed them time to prepare for specific content areas which are dealt with in the Manual, and provided the relevant references that familiarized them with the type of questions found in the SQT. Many soldiers expressed appreciation for the open information system built around the SQT.

III. Skill Qualifications Test

A. Feedback of Test Results

This first section deals with the feedback of the results to the soldier--how well a soldier performed on the test and how long it took to get the results back. Only the 11Bs and 11Cs who were tested in the summer of 1977 had received their official scores on the SQT at the time the interviews were conducted. The average delay between taking the SQT and receiving their official score reports was about 2 1/2 months. Of these soldiers, about half reported having achieved a passing score.* The 95Bs and 16Ps tested in November and December had not yet received their scores. The 16Ps expected feedback in about 2 1/2 months, while the 95Bs expected feedback

* This passing rate is considerably higher than the overall post average, suggesting that our sample may not be representative of the post population, or self-enhancing bias in reporting.

in 1 1/2 months. All of the 16Ps expected to pass, and a substantial majority of the 95Bs thought they would achieve a passing score. This may be over-optimistic, given the performance of others on post. As one test site manager said:

"A lot of people were over confident - they do it everyday - suddenly they have to do it by the book, no short cuts."

A First Sergeant said:

"Though they did well in HOC, they did poorly on the WC. They had a false sense of security on the written, they said "I know that", they said it was easy even after the test and then they failed."

Feedback was given to individual soldiers in the form of a computer print-out which had the number of scorable units passed and failed, and the units where mistakes were made. These printouts were difficult to understand and in most cases there was no discussion of these data with more knowledgeable soldiers. One test officer on post said:

"They send out results, and keep a copy in record. They don't say what is to be done with it."

The feedback form also did not specify what specific items in the scorable units were missed. These limitations obviously imposed restrictions upon the learning potential that could be derived from the feedback of test results.

B. Evaluation of the SQT

In general, the SQT was regarded favorably; it was seen as fair, comprehensive and understandable. Even if a number of specific things could be improved, and specific items changes were requested, the soldiers' appraisal of general coverage was good.

The Hands-On Component. The inclusion of HOC (Hands-on Component) was favorably regarded, particularly on the lower levels. The major problem perceived with the HOC concerned its over-simplicity. For many, the feeling expressed was that HOC tested only the most rudimentary skills, and soldiers did not feel they had been tested on their real competencies. For example, the HOC test of setting up a radio in a jeep only involved the mechanical installation of the radio. Even the lowest ranking soldiers felt that they did more on the job than they were tested on. For the higher ranks (E4 and up) the simplicity of the HOC was even more of a problem. A number of them felt "insulted" at being tested on things they could do "in their sleep", and many felt that a

more realistic and demanding HOC would have been more appropriate on their jobs. In addition to being overly simple, the MPs also felt that some of the HOC sets had standards too low, particularly in cases where actual performance demanded 100% accuracy.

Another HOC issue concerns raters. A number of soldiers complained about unfairness in rating when the raters belonged to a different company or battalion. In such cases, the perception was one of competition among companies or battalions on HOC scores. In addition to the bias issue, another concern was with the requirement for certain types of Army "specialists" to act as raters. In view of the specificity of rating procedures, such requirements tended to be seen as unnecessarily burdensome to the units where the specialists come from. A 16P said:

"The test needed 7 16Ps, all E-6s, to be scorers for the Red eye HOC. The test was so well specified in the Test Manual it didn't need specialists - anyone could have set it up. It would be fairer and more efficient for one group at the installation to do all the HOC testing for the Red eyes. It didn't need me and my specialized knowledge."

The Written Component. Reactions to the WC (written component) were generally favorable. Most thought the coverage of important job tasks fairly good, particularly at the higher levels. For those who had experience with the old MOS tests, there were great similarities seen between the MOS tests and the WC of the SQT--in fact, a number of soldiers used the MOS test manual to prepare for the SQT. Two main factors were seen as contributing to difficulty--the greater length of the SQT WC and the closeness of alternatives presented for multiple choice questions.

Reading comprehension in the test situation, while apparently not a problem for the bulk of the respondents, posed some difficulty for a few soldiers. The problems centered around the close wording choices in the test and the use of unfamiliar terms. There was no mechanism available by which soldiers could clarify the meaning of ambiguous questions that they could not understand.

General Problems. A serious SQT problem concerns discrepancies between the SQT content and the soldiers' job contents. One complaint voiced is that the SQT

seems more heavily geared towards infantry duties than any others. Another complaint was the difference between local post procedures and standard SQT requirements. This was particularly true of the Fort Polk MPs. In other cases, soldiers were tested on their primary MOS, whereas they were actually working in a different job. At times, even when they stayed in assignments within their MOS, their jobs did not involve activities typical of the MOS. Many of the 16Ps, for example, reported that their job duties involved only vehicle maintenance in a motor pool. Also, since the test was intended to cover all basic skill areas, a few soldiers in specialized jobs felt that they were tested in areas (e.g., map reading, CBR-chemical biological radiation-signs) which were irrelevant to their specific jobs. Finally, soldiers in supervisory positions felt that they were tested almost exclusively on the technical aspects of their jobs, and not enough on their supervisory functions.

Another frequently mentioned and related reaction was the lack of congruence between the contents of both the HOC and WC and the soldiers' training experiences. Again a number of causes appeared to create these discrepancies. One factor mentioned was inadequate specific training (e.g., poor instructions, inappropriate equipment used for practice), resulting in neglect of several areas tested by the SQT. Also some soldiers said that the basic combat skills required by the SQT were not developed during basic and MP training. In some cases, sample test items prepared locally did not have the same answers as those required by the test. Soldiers also complained that raters, particularly in the HOC, marked as wrong behaviors that were done according to the way they had been taught. Finally, certain types of classified equipment were not available for training purposes, but were included in the test (e.g., for 16 Redeye gunners).

Closer examination of the interviews revealed that there were consistent MOS differences in the perceptions of fit (or misfit) between the SQT and jobs or training. Whereas all the Infantrymen (11B and 11C) interviewed believed the SQT adequately covered all the important facets of their jobs and training, a clear majority of the 16Ps and 95Bs felt that the SQT did not cover their jobs/training adequately. Difficulties in this area were most pronounced for the MPs.

A third major problem for the enlisted persons interviewed was the SQT's lack of realism. A soldier said that whereas the SQT expected one to follow the rule books and manuals, word for word, real combat situations would call for more flexible behavior. A heavy weapons infantryman (11C) pointed out that while his LAW test did not allow weapon firing, whereas a combat situation would have called for that. A sergeant in charge of the MP HOC felt that some of the HOC units were written up by "some captain or major who had a vague idea about the process involved from reading the books", resulting in vague and incomplete procedures. These comments were fairly typical. Realism would seem to be especially important for the HOC, given the basic rationale for hands-on testing.

C. Training for the SQT

Whereas it was general post philosophy to "train for the tests", actual training was not given for all MOS. Of the 11B and 11C soldiers interviewed, about half reported having participated in formal unit training, and half were self-prepared. Among the 16Ps and 95Bs, about half prepared for the SQT by themselves, and half did no preparation at all.

Formal unit preparation usually consisted of an intensive two-week training period immediately prior to the SQT administration. Classes were held to handle sections of the Manual, with "experts" from other units called in occasionally to deal with more technical specialties. Classes included verbal instruction as well as hands-on practice. Some MOS (e.g., the 16Ps) had scheduled platoon wide sessions in their MOS library. Video-taped training films were also employed.

Some complaints about these training classes resemble problems found in classes of any sort. Some of the training was perceived as repetitious, conducted merely to follow the letter of the law. Classes were reported to be boring. Training was conducted by the NCOs, in conjunction with the Training Officer from each company. Quality of the classes, therefore, varied a great deal, depending on the quality of instructor.

Other problems, however, were embedded in the Army system. For both WC and the HOC, there was great attention given during the training to the "one best way" or the "one best answer" without providing the

rationale behind such "best solutions". In many cases, this resulted in confusion and a lot of anger (from the soldiers) when test conditions did not match exactly the conditions, procedures, etc., which they had trained on. This was true of a lot of cases in which it would have been reasonable to expect transfer of training (e.g., sighting a target from a kneeling position in the training, and from a standing position on the tests; or changing the distance requirements from training to test). While this is a perennial training problem, many expressed the view that this was particularly bad in the Army set-up where very few explanations were ever given on why things had to be done one way and not another. In the effort to train people to follow rules and orders (undeniably important for discipline and other purposes), training often seems to overlook the substance behind the rule or order.

Another training problem particular to the Army is the unavailability of training equipment because they are classified. For example, certain parts of the test for 16Ps dealt with assembling sights on aircraft. Information about these procedures as well as equipment itself were classified and not available on post.

In addition to formal classes, preparation for the testing period included the development and distribution of sample test questions by brigade headquarters. The sample questions were developed "test-blind" by a team of NCOs, on guidance from the division commander. An example of a sample SQT is found in Appendix B. The sample questions, prepared for each MOS, may have been a double-edged sword. They may have been useful to increase soldiers' familiarity with the multiple choice format; however, because they were prepared "test-blind" they also served to distract the soldiers by focusing their attention on areas not relevant to the test, or not identified in a particular SQT Notice.

Not all of the companies provided formal SQT training. The data indicate that formal training improved performance on the SQT. Of the 11B and 11C soldiers who went through formal unit preparation, about two-thirds passed the SQT, while about half of the self-prepared soldiers passed the test. Less than half of the soldiers without any type of preparation reported that they had achieved a passing score on the SQT. These data could be highly significant. Caution should be used, however,

in inferring the generalizability of this finding because the results were based on a small and perhaps unreliable sample.

D. Importance Ascribed to the SQT

Soldiers were asked how seriously they and their co-workers took the test. Interest in the SQT on post was highly differentiated hierarchically--there was high degree of excitement at the command level, considerable degree of involvement among those who perceived themselves as potential Army careerists, and little or no interest among the one-termers or those who are at the end of their contracts.

Almost three quarters of the men reported that they took the SQT seriously. They also believed that there were links between their test performance and a number of intrinsic or extrinsic rewards (e.g., promotion and sense of accomplishment). In contrast, of the same soldiers, a slight majority perceived that their peers, subordinates and/or superiors did not take the test seriously and saw little personal benefit coming from their test performance. Other studies have shown similar discrepancies between reports of own attitudes and reports of attitudes of the general public on the same issues. In general, people tend to present the more socially desirable response for themselves and attribute less desirable attitudes to others. The truth is probably somewhere in between.

Apart from the exact degree of seriousness given the SQT by the soldiers, the issue of test-taking motivation needs to be addressed. There seems little to motivate individuals who see themselves as leaving the Army shortly, even if rewards such as promotion are tied to the test. This may be an acceptable state for the purpose of making personnel decisions, since promotion would be determined, at least partly, by test interest or motivation to do well. However, lack of motivation on the part of a significant block of test takers also means that test results could be an erroneous indicator of the actual level of proficiency found in the Army population. It could also provide a distorted view of training needs and areas of weakness at the company and battalion level, unless appropriate corrections were incorporated into the analysis.

Apropos the issue of test motivation, a number of soldiers said that they would appreciate fuller explanation of the functions the test was expected to fulfill--in the words of one soldier, "to tell us why it was, not

only that it was there". Such clarification of rationale would provide the soldiers with a more accurate picture of testing consequences, and would alleviate the feeling that "the SQT is just one more thing the Army gives us to do to keep us busy."

SUMMARY OF MAJOR FINDINGS

The major findings for each of the three major areas are summarized below:

I. Soldiers' Manual

The primary user of the Manual was not, as originally thought, the regular soldiers, but rather the instructors on post. These instructors -- squad leaders and other NCOs in charge of training -- used the manuals extensively to plan curricula and prepare lessons. Most regular soldiers used the Manual occasionally as a reference tool.

In general the Manual was well received, although the quality of different manuals seemed to range widely.

II. The SQT Notice

At present the Notice's potential utility is not fully exploited. While it was useful for those who were aware of it, its major problem was the soldier's tendency to disregard it among the many other notices received.

III. The Skill Qualification Test

Although the overall reaction to the SQT was favorable, several test-related problems were identified: the overly rudimentary nature of the HOCs, rater problems for the HOC, discrepancies between the SQT and the soldiers' jobs and training, and lack of test realism.

Performance on the SQT appeared to be improved by "training for the test". Much larger percentages of soldiers who had formal unit test training passed the SQT, compared to soldiers who prepared for the test on their own.

DISCUSSION AND SUGGESTIONS

Test results can be regarded as the outcome of three major factors: the characteristics of the test itself, the test-takers' actual abilities and the level of motivation relevant to the test. The SQT outcomes obtained so far may be understood further by discussing the interview responses in terms of each of these factors. Suggestions relevant to each of these factors will also be presented.

Test Characteristics

Since the SQT consists, in fact, of two different tests, the HOC and the WC, separate discussions of relevant issues will be presented. For each component, we will deal with:

- test coverage
- test difficulty
- rating accuracy and fairness

Hands-On Component

The effort to use hands-on tests on a systematic basis is new to the Army testing system; thus the HOCs are still at a very primitive stage of development. Although there has been much publicity and a great deal of attention to the Hands-On Component of the SQT, there are still very few such units developed, and the prospects for increasing their numbers, seen as ideal, are somewhat questionable. Time and cost are among the major factors constraining HOC development.

Test coverage. At present, the HOCs cover only the most elementary aspects of soldiers' jobs. The extent to which hands-on tests of more complex tasks can and will be developed is an open question. Future hands-on coverage of supervisory, as opposed to technical, job aspects is even more questionable. One suggestion made for testing such complex functions in a quasi-hands-on manner was to increase the use of video-taped test units. Such tests would be able to present complicated situations with relatively high levels of realism. Other techniques developed in organizational performance assessment centers may also present useful compromises in testing higher level skills.

Test difficulty. Since the HOCs cover basic skills, most of them appear to be rather elementary. Perceived difficulty with the HOC appears to arise from two main factors: Lack of congruence between training and test requirements, and disagreements concerning adequate standards, particularly with regard to completeness and sequencing of required behaviors.

Rating accuracy and fairness. HOC test outcomes could have been affected by rater bias--reports were that raters tended to be partial toward members of their own units. The extent to which this represents a real, wide-spread phenomenon is unclear. It was suggested that greater fairness would be obtained by assigning the HOC raters' function to a central group on post (e.g., the AG Test Center).

Suggestions. We have four suggestions for the HOC:

- HOC units testing performance on more complex technical and supervisory tasks should be developed using video-taped tests and assessment center methodology,
- Standards for defining adequate performance levels should be made clearer, ideally with greater opportunity for field input,
- Areas where training and test requirements conflict should be identified and clarified,
- The extent of rater-bias problems should be investigated.

Written Component

Whereas the SQT was conceived originally as an effort to get away from paper-and-pencil testing, at present the test is at least 90% in written form. Most of the soldiers' duties, therefore, are tested by multiple choice questions.

Test coverage. In general, job coverage by the WC was perceived to be quite adequate. The main exceptions to this were soldiers who held job assignments that were, in fact, in an MOS or a level different from that officially on record.

Test difficulty. On the whole, the WC was perceived as more difficult than the HOC and was longer than the old MOS tests it replaced. Among the test characteristics, WC level of difficulty probably had greatest effect

on test scores. WC test difficulty was due to several factors: (1) length and limited time, (2) problems in the comprehension of terms, (3) inability to choose among similar response alternatives, and (4) lack of clarity in question wording.

Rating accuracy and fairness. Rating problems for the WC concerned not individual rater deficiencies, but rather system short-comings. A number of soldiers' tests had scoring errors and there were cases of confusion with regard to passing scores.

Suggestions. We have three suggestions for the WC:

- Examine existing time requirements for WC,
- Examine test vocabulary and comprehensibility,
- Identify factors responsible for scoring errors in SQT data-processing center(s).

Individual Ability

In discussing the factors that affect the test-taker's ability, we will focus on the soldiers already in the Army. We will not consider the issue of selection or entry processes and their effects on the caliber of soldier available. The emphasis instead is on factors within the Army that affect the soldier's ability to perform well on the test, i.e., training issues.

The individual's ability to perform on the SQT is affected directly by the quality of training in which the soldier participates. It seemed to be a general feeling that problems on the SQT lay more in relevant training than in the test itself. Training problems that appear to affect SQT performance are of two types:

- Testing training problems relevant to specific SQT preparation (e.g., familiarization with test format and specific test questions),
- Content training problems (i.e., actually developing the skills to be tested).

Test Training

Where procedures were instituted on post to prepare for SQT testing, they appeared to be quite effective. Soldiers were informed a few weeks

ahead of time about the SQT. Notices were distributed widely and were used by many soldiers to become familiar with types of questions on the SQT and with the material relevant to the test areas. In addition, practice for the multiple choice format was provided by the sample questions prepared at the post.

Content Training

There were more problems with the content training aspect. Soldiers felt that they did not learn relevant areas adequately because of three problems: (1) uninteresting classroom procedures, (2) lack of relevant equipment for practice, and (3) "cramming" for the SQT--peaking training in the two-week period before the SQT.

Uninteresting classroom procedures. Maintaining interest in training classes is a perennial problem. Complaints about the classes tended to focus around the mechanical and seemingly rote manner in which they were conducted. While the problem of perceived meaningfulness of training classes is one that is too complex to be handled here, several concrete suggestions may be helpful.

Suggestions. Classroom improvements may come about by focusing on the "teacher" as well as on classroom activities themselves. We suggest:

- More training should be provided potential trainers about teaching/training techniques,
- There should be more use of technical training tapes during classroom sessions,
- More hands-on practice should be integrated into classroom activities.

Lack of relevant training equipment. Providing the necessary equipment for training, while appearing to be a simple matter, is complicated by several factors. One is the difficulty of using classified equipment. A second problem involves scheduling--the SQT Notices which specify areas to be tested apparently come out after the training schedules have been set. In addition, forecasts for ammunition have to be provided a year in advance; way before it is possible to know the requirements emerging from the SQT. Another potential bottleneck on scheduling which may affect the provision of training equipment is the post Test Control Office. The TCO does not

feel that adequate notice is given about when each MOS will be tested, which deficiency in turn affects the start-up of the entire SQT mechanism.

Suggestions. Our suggestions are:

- Training and testing problems stemming from classified equipment should be examined and appropriate action in test design or post procedures should be taken,
- The testing schedule should be drawn up enough in advance to accommodate training needs on post.

Cramming for the SQT. The appropriateness and utility of the two-week intensive SQT training is a complicated issue. If SQT is intended to be a measure of individual abilities and general level of competence, the appropriateness of "training for the test" becomes somewhat questionable. Local command, however, supported the intensive training philosophy. From the utility standpoint, it does appear that the crash course made for better test performance.

There were many, however, who felt that the two-week intensive training was too short for adequate learning, and that such training should be conducted throughout the year. The implication that individual training in general is not a continuous concern was voiced by the few officers interviewed. The greater post concern appeared to be on platoon (ARTEP) training, which had repercussions on evaluation of officers rather than that of the rank and file. In theory, individual training is integrated into platoon and company field training. In practice, however, ARTEP was perceived as having primacy, with consequent neglect of individual training. One officer reported that out of the year, only six weeks were devoted to individual training.

Suggestion. Actual relationships between individual and platoon training should be examined, and mechanisms to facilitate their integration devised.

Individual Motivation

The individual's motivation to do well on the test may be the factor most open to influence. In the SQT system, motivation is affected by the following:

- The perceived rationale for the SQT
- SQT feedback
- Intrinsic rewards from SQT performance

The Perceived Rationale for the SQT

Basic to the motivational problem is the individual's understanding of the rationale for the SQT, both for the post as a whole and for themselves personally. Individuals who see the SQT as another meaningless Army activity, done merely to keep busy, naturally find it difficult to take the test seriously. In addition, to the extent that the use of the SQT for personnel decisions is unclear, the motivation for good performance on the test will be depressed.

Suggestion. In order to increase motivation to perform well on the SQT, consequences of good and bad performance on the test have to be made explicit and salient.

SQT feedback. Useful feedback regarding an individual's strengths and short-comings may provide the soldier an incentive for performing up to his real level of competence in the next round of testing. On the other hand, feedback that is unintelligible or inadequate in any other way only provides the soldier further confirmation that the entire testing process is a futile exercise.

Suggestions. Several suggestions can be made in this regard:

- The present feedback form can be improved in several ways: (1) it can be simplified considerably so that it is more intelligible to the average soldier, (2) it should provide the actual items missed, and provide a mechanism for locating the correct answers,
- Feedback should not only be more informative, but also more timely,
- Systematic mechanisms for discussion of test results with relevant superiors should be devised.

Intrinsic rewards from SQT performance. For soldiers who are near the end of their contract, and who do not intend to re-enlist, the major motivational factor for taking the test is intrinsic enjoyment obtained from the process. Some soldiers enjoyed the idea of testing themselves and showing competence. Others liked the performance itself, particularly with the hands-on and video-taped testing. The intrinsic rewards obtainable

from the SQT are, however, probably the least influenceable among the factors affecting test performance.

APPENDIX A

SQT INTERVIEW FOR ENLISTED MEN

Interviewer_____

MOS_____Installation_____

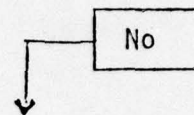
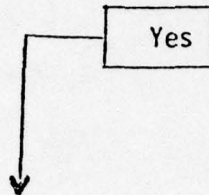
Rank_____Age_____Company/Battery/Troop_____

Race_____Marital Status_____

Date of First Entry Into Service_____Education_____

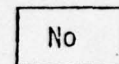
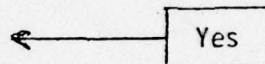
INTERVIEW QUESTIONS FOR SQT FIELD STUDY

1. Do you have a copy of the Soldier's Manual for your MOS?



- 1.2a Is there a Soldier's Manual available for you to use?

- 1.1a When was the last time you used it? How often do you refer to it?



- 1.1b How much of the manual have you read?

1.1c Is time set aside for you to
study the Soldier's Manual?
(If yes), when is this?

1.1d Do you find the manual helpful
in telling you what you should
know about your job? (If yes),
in what ways was it helpful?

1.1e Do you have trouble using the
Soldier's Manual? What things
caused the most trouble for you?

1.1f Do you have any trouble under-
standing the words used in the
Manual? Are the steps detailed
enough to follow?

1.1g Is time set aside for you to practice the tasks described in the Soldier's Manual? When? Is the equipment available to use for practice?

1.1h What do you think can be done to improve the Manual?

1.1i (For SQT takers) Did you find the Manual useful in preparing for the SQT?

2. Have you taken an SQT:

↓ 2.1 Yes

2.1a When?

2.1b Which SQT did you take?

2.1c How did you do on the test?
How long did it take to get the results back?

↓ 2.2 No

2.2a Do you know what they are?

Yes



No

↓
Explain briefly

2.2b Are you planning to take one

Yes



No

↓
Why not?

2.1d What did you think of the
SQT in general?

2.2c Which one? END OF INTERVIEW

2.1e Do you think the SQT is a
good test?

2.2d What have you heard about the
SQT from others?

2.1f Did the SQT cover the important
things a soldier in your present
job should know?

- (1) Written
- (2) HOC

2.2e Are you doing anything to pre-
pare for the SQT? What?

2.1g Did it cover what is required at
the next level?

- (1) Written
- (2) HOC

2.1h What did the test cover more, your present job or the next level up?

2.1i Did you ever take the old MOS tests? (If yes), do you think it is better or worse than the previous MOS type test?

2.1j Did you have any trouble taking the SQT? What problems did you have? Which were the biggest problems for you?

2.1k Could you understand the test?
Did you know what the questions
were asking for?

2.11 Are there any particular things
you especially liked about the
SQT?

2.1m What do you think can be done to improve the tests, if anything?

2.1n How did you prepare for taking the SQT?

3. Do most people around here take these tests seriously? Do you take them seriously?

4. Do you know what an SQT notice is? (If not, explain briefly). Have you received any SQT notices?

✓ ☐ Yes

☐ No

(For SQT takers)

- 4.1a Did you use the SQT notice
in preparing for the test?
How?

- 4.1b Did you have any serious
problems with it? What things
about it caused you problems?
Was it helpful? In what way?

(For Non-SQT takers)

4.2a Are you using the SQT notice
to prepare for the SQT test?
How?

4.2b Do you have any problems with
it? What?

APPENDIX B

SUPPLEMENT II

TEST III

MOS 11C30 SAMPLE SQT TEST

WRITTEN COMPONENT

As an 11C30, you will be taking the test for MOS 11C skill level 1, 2, 3, and 4. Supplement I to the test consists of skill level 3 questions and supplement II contains skill level 4 questions. You will not be required to answer the following questions on the basic test, but will answer those questions in Supplement I and II.

Do not answer questions 2, 7, 9, 15, 16, 23, 26, 28, 32, 35, 39, 41, 49, 55, 58, 59, 64, 66, 68, 73, 77, 83, 90, 94, and 100.

DO NOT WRITE ON TEST!!

YOU WILL BE GIVEN AN ANSWER SHEET

SUPPLEMENT II

TEST III

TASK 0075 - REQUEST/CONTROL MEDICAL AIR EVACUATION OF CASUALTY/CASUALTIES

141) The minimum requirement for a light helicopter is a cleared area _____ feet in diameter, with an approach and departure zone clear of obstruction.

- a. 50
- b. 100
- c. 150
- d. 200

142) Which cases would be picked up first?

- a. Urgent cases
- b. Priority cases
- c. Routine cases

143) If there is more than one casualty, the most serious litter casualties should be loaded _____, so they can be unloaded first upon arrival at the field hospital.

- a. First
- b. In the middle
- c. Last
- d. It doesn't matter

TASK 5705 - ESTABLISH A LISTENING POST/OBSERVATION POST

144) OP's are used primarily during the hours of _____.

- a. Darkness
- b. Daylight
- c. Both darkness and daylight

145) OP's and LP's can be set up at the same location - True or False.

146) What should be the primary means of communication for an OP and LP?

- a. Radio
- b. Runner
- c. Wire
- d. None of the above

147) On an OP, the observer and recorder should switch duties every _____ minutes because the visual efficiency of an observer decreases rapidly after that length of time.

- a. 15 minutes
- b. 30 minutes
- c. 45 minutes
- d. 60 minutes

TASK 5503 - ASSIST IN PLANNING/IDENTIFYING MISSIONS FOR MORTAR PLATOON SECTION

148) There are four standard tactical missions which may be assigned to mortar units - True or False.

149) What is the most desirable method of employment?

- a. Direct support
- b. Reinforcing
- c. Attached
- d. General support

150) Direct support is the usual method of employment when the unit front is to the point that the mortars can give adequate support from one position - True or False.

TASK 5504 - DIRECT DISPLACEMENT OF MORTAR PLATOON

151) What is the best method of displacement when providing the most fire support?

- a. Three echelons
- b. Two echelons
- c. One echelon

152) What is the least desirable method of displacement?

- a. Three echelons
- b. Two echelons
- c. One echelon

TASK 5506 - ESTABLISH SECURITY FOR MORTAR/WEAPONS PLATOON POSITION

153) The Lazy "W" formation is a good formation for conventional warfare - True or False.

154) What is the easiest formation to defend the 81mm mortar and the 4.2 mortar position?

- a. The Lazy "W"
- b. The Diamond
- c. The Triangle
- d. b for 4.2 and c for 81mm

155) At the squad level, security is particularly directed to noise and light discipline - True or False.

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1 USA Air Def Bd, Ft Bliss, ATTN: STEBD-PO
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 1 Air Force Academy, CO, ATTN: Dept of Bel Scn
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